

## WHAT IS CLAIMED IS

1. A water heating device adapted to be mounted to a water passageway through which water flows for heating the water, the water heating device comprising:
  - a hydroelectric generation system comprising:
    - a turbine mounted to passageway for being driven by the water flowing through the passageway, and
    - a generator coupled to the turbine by a shaft whereby the generator is driven by the turbine to generate electricity; and
  - an electrical heater mounted to a heated section of the passageway, the electrical heater being electrically connected to the generator for being powered by the electricity from the generator; and
  - a control unit coupled to the electrical heater and the generator for controlling the electricity supplied to the electrical heater.